

Abstract

Oberwolfach Workshop:

Stochastic Processes under Constraints

Dates:

27 Sep - 3 Oct 2020 (Code: 2040b)

Organizers:

Frank Aurzada, Darmstadt

Martin Kolb, Paderborn

Francoise Pène, Brest

Vitali Wachtel, Augsburg

The analysis of random processes under various constraints and conditions has been a central theme in the theory of stochastic processes, which links together several mathematical subdisciplines. The connection between potential theory and a certain type of conditioning of Markov processes via Doob's h -transform can be seen as a classical highlight. The last decades have seen further exciting and highly interesting developments which are related to the title of the proposed workshop such as the analysis of persistence exponents for various classes of processes and various types of penalization problems. Many of these problems are rooted in questions from statistical mechanics. The workshop aims to investigate the topic stochastic processes under constraints from all these different perspectives.